

## Biosolids Annual Report Landing Page / BELLINGHAM STP

NPDES ID: WAL023744

Facility Status: Active

Facility Name: BELLINGHAM STP

2221 PACIFIC ST BELLINGHAM, WA 98229-5823

# View Annual Report



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY  
WASHINGTON, DC 20460  
BIOSOLIDS ANNUAL REPORT

FORM  
Approved OMB No.  
2040-0004

EPA's sewage sludge regulations require certain publicly owned treatment works (POTWs) and Class I sewage sludge management facilities to submit to a Sewage Sludge (Biosolids) Annual Report (see 40 CFR 503.18 ([https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503\\_118](https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_118)), 503.28 ([https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503\\_128](https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_128)), 503.48 ([https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503\\_148](https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_148))). Facilities that must submit a Sewage Sludge (Biosolids) Annual Report include POTWs with a design flow rate equal to or greater than one million gallons per day, POTWs that serve 10,000 people or more, Class I Sludge Management Facilities (as defined by 40 CFR 503.9 ([https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503\\_19](https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_19))), and facilities otherwise required to file this report (e.g., permit condition, enforcement action, state law). This is the electronic form for Sewage Sludge (Biosolids) Annual Report filers to use if they are located in one of the states, tribes, or territories (<https://www.epa.gov/npdes/npdes-state-program-information>) where EPA administers the Federal biosolids program.

For the purposes of this form, the term 'sewage sludge' ([https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503\\_19](https://www.ecfr.gov/cgi-bin/text-idx?node=pt40.32.503&rgn=div5#se40.32.503_19)) also refers to the material that is commonly referred to as 'biosolids'. EPA does not have a regulatory definition for biosolids but this material is commonly referred to as sewage sludge that is placed on, or applied to the land to use the beneficial properties of the material as a soil amendment, conditioner, or fertilizer. EPA's use of the term 'biosolids' in this form is to confirm that information about beneficially used sewage sludge (a.k.a. biosolids) should be reported on this form.

Please note that EPA may contact you after you submit this report for more information regarding your sewage sludge management program.

## Program Information

**Please select at least one of the following options pertaining to your obligation to submit a Sewage Sludge (Biosolids) Annual Report in compliance with 40 CFR part 503. The facility is:**

- a POTW that serves 10,000 people or more

**In the reporting period, did you manage your sewage sludge or biosolids using any of the following management practices: land application, surface disposal, or incineration?**

☒ YES ☐ NO

**If your facility is a POTW, please provide the estimated total amount of sewage sludge produced at your facility for the reporting period (in dry metric tons). If your facility is not a POTW, please provide the estimated total amount of biosolids produced at your facility for the reporting period (in dry metric tons).**

3648

**Reporting Period Start Date:** 01/01/2018

**Reporting Period End Date:** 12/31/2018

Treatment Processes
<p><b>Processes to Significantly Reduce Pathogens (PSRP):</b></p> <p><b>Processes to Further Reduce Pathogens (PFRP):</b></p> <p><b>Physical Treatment Options:</b> <u>Preliminary Operations (e.g., sludge grinding, degritting, blending)</u> <u>Thickening (e.g., gravity and/or flotation thickening, centrifugation, belt filter press, vacuum filter)</u></p> <p><b>Other Processes to Manage Sewage Sludge:</b> <u>Other Treatment Process</u></p> <p><b>Other Treatment Process Text Area</b></p> <div>Incineration</div>
Analytical Methods
<p><b>Did you use any analytical methods to analyze sewage sludge in the reporting period?</b>      <input checked="" type="checkbox"/> YES    <input type="checkbox"/> NO</p> <p><b>Analytical Methods</b></p> <ul style="list-style-type: none"><li>• EPA Method 6010 - Arsenic (ICP-OES)</li><li>• EPA Method 6010 - Cadmium (ICP-OES)</li><li>• EPA Method 6010 - Chromium (ICP-OES)</li><li>• EPA Method 6010 - Copper (ICP-OES)</li><li>• EPA Method 6010 - Lead (ICP-OES)</li><li>• EPA Method 7471 - Mercury (CVAA)</li><li>• EPA Method 6010 - Nickel (ICP-OES)</li><li>• EPA Method 6010 - Zinc (ICP-OES)</li><li>• EPA Method 6010 - Beryllium (ICP-OES)</li><li>• Standard Method 2540 - Total Solids</li><li>• Standard Method 2540 - Volatile Solids</li></ul>
Sludge Management - Land Application
Sludge Management - Surface Disposal

Sludge Management - Incineration

**ID:** 001

**Amount:** 3648

**Handler, Preparer, or Applier Type:** On-Site Owner or Operator

Monitoring Data

**INSTRUCTIONS:** Please complete the following section for the sewage sludge incineration conducted by you or your facility. Use the button below to add incinerators to this form if there is more than one incinerator at your facility. Please note that beryllium and mercury monitoring should be conducted from the stack gas of each incinerator. Arsenic, cadmium, chromium, lead and nickel monitoring should be conducted separately for each feed to a sewage sludge incinerator. EPA will be using these data to demonstrate compliance with EPA's biosolids incineration requirements (40 CFR 503, Subpart E).

Compliance Monitoring Periods

Incinerator: 1

INSTRUCTIONS: Please use the section below to report operational information for this incinerator.

Identify the type for this incinerator (select one): Multiple Hearth Incinerator (MHI)When did the source last undergo a significant change in geographic or physical characteristic or operating conditions? 07/01/1973Were new pollutant limits calculated following such changes? ☒ YES ☐ NO

Identify all the different types of emissions control technology for this incinerator (check all that apply):

**Wet Scrubber**Single Venturi  
Impingement Trays  
Other

Other Text Area:

Wet electrostatic  
precipitator**Dry Scrubber**Other

\ Other Text Area:

Afterburner

**Mercury Control**

**INSTRUCTIONS:** Please use the table below to report beryllium and mercury monitoring data from the stack gas of this incinerator. The frequency of monitoring for beryllium shall be as required in subpart C of 40 CFR part 61 [40 CFR 503.46(a)(1)]. The frequency of monitoring for mercury shall be as required in subpart E of 40 CFR part 61 [40 CFR 503.46(a)(1)]. You may report no beryllium stack gas monitoring data if you attach a document to this form detailing the approval you received from your EPA Regional Administrator to waive the monitoring of beryllium in the stack gas of your incinerator (40 CFR part 61, Subpart C). EPA will use the stack gas monitoring data below to evaluate compliance with emissions standards for beryllium (40 CFR 61.32) and mercury (40 CFR 61.52).

Pollutant	Value Qualifier	Mass of Pollutant During any 24-hour Period in the Stack Gas of this Incinerator (grams)	End Date of 24- hour Sampling Period	If No Data, Select One Of The Following
Mercury	=	0.0893	04/16/1993	
Beryllium	<	0.0763	04/16/1993	

**INSTRUCTIONS:** This incinerator must have instrumentation to continuously monitor and record carbon monoxide or total hydrocarbons concentrations in the stack exit gas from this sewage sludge incinerator. Please use the table below to report the monthly average concentration of carbon monoxide or total hydrocarbons in the stack exit gas from this sewage sludge incinerator, corrected for zero percent moisture and to seven percent oxygen. The monthly average concentration is the arithmetic mean of the hourly averages for the hours this sewage sludge incinerator operates during each month. EPA will use the stack gas monitoring data below to evaluate compliance with EPA's carbon monoxide and total hydrocarbons standards [40 CFR 503.40(c)(2) and 503.44(c)].

Incineration Process Control Parameter	Value Qualifier	Monthly Average Concentration (ppm, volumetric basis, 0% moisture and 7% oxygen basis	End Date of Sampling Period Month	If No Data, Select One Of The Following
Total Hydrocarbons	=	5.4	01/2018	
Total Hydrocarbons	=	6.1	02/2018	
Total Hydrocarbons	=	6.1	03/2018	
Total Hydrocarbons	=	6.7	04/2018	
Total Hydrocarbons	=	5.3	05/2018	
Total Hydrocarbons	=	17.3	06/2018	
Total Hydrocarbons	=	7.9	07/2018	
Total Hydrocarbons	=	9.4	08/2018	
Total Hydrocarbons	=	8.6	09/2018	
Total Hydrocarbons	=	7.1	10/2018	

**INSTRUCTIONS:** Use the table below to report arsenic, cadmium, chromium, lead and nickel monitoring data from the sewage sludge feed to this sewage sludge incinerator. Please report the average daily concentration for each pollutant in units of milligrams per kilogram (mg/kg) of total solids, dry weight basis. Please note that the average daily concentration is the arithmetic mean of the concentration of a pollutant in milligrams per kilogram of sewage sludge (dry weight basis) in the samples collected and analyzed in a month [40 CFR 503.41(c)]. The frequency of monitoring for these metals shall be as required in 40 CFR 503.46(a)(2). EPA will use these sewage sludge feed monitoring data and the incinerator-specific limits below to determine compliance with EPA's biosolids incineration requirements (40 CFR 503, Subpart E).

Pollutant	Value Qualifier	Average Daily Concentration in the Sewage Sludge Feed to this Incinerator (mg/kg of total solids, dry-weight basis)	Start Date of Sampling Period	End Date of Sampling Period	If No Data, Select One Of The Following
Arsenic	=	1.9	01/17/2018	11/13/2018	
Cadmium	=	1.22	01/17/2018	11/13/2018	
Chromium	=	12	01/17/2018	11/13/2018	
Lead	=	13	01/17/2018	11/13/2018	
Nickel	=	7.6	01/17/2018	11/13/2018	

**INSTRUCTIONS:** Use the table below to report the average daily concentration limits for the sewage sludge feed to this incinerator (mg/kg of total solids, dry weight basis). EPA will use these incinerator-specific limits and the sewage sludge feed monitoring data reported above to determine compliance with EPA's biosolids incineration requirements (40 CFR 503, Subpart E). Please use the procedures in EPA's regulations to calculate these incinerator-specific limits (40 CFR 503.43).

Pollutant	Average Daily Concentration Limit for the Sewage Sludge Feed to this Incinerator (mg/kg of total solids, dry-weight basis)
Arsenic	1425
Cadmium	4439
Chromium	4552
Lead	45461
Nickel	144470

Incinerator: 2

INSTRUCTIONS: Please use the section below to report operational information for this incinerator.

Identify the type for this incinerator (select one): Multiple Hearth Incinerator (MHI)When did the source last undergo a significant change in geographic or physical characteristic or operating conditions? 04/15/0094Were new pollutant limits calculated following such changes? ☒ YES ☐ NO

Identify all the different types of emissions control technology for this incinerator (check all that apply):

**Wet Scrubber**

Single Venturi  
Impingement Trays  
Other

Other Text Area:

Wet electrostatic  
precipitator

**Dry Scrubber**

Other

\ Other Text Area:

Afterburner

**Mercury Control**

**INSTRUCTIONS:** Please use the table below to report beryllium and mercury monitoring data from the stack gas of this incinerator. The frequency of monitoring for beryllium shall be as required in subpart C of 40 CFR part 61 [40 CFR 503.46(a)(1)]. The frequency of monitoring for mercury shall be as required in subpart E of 40 CFR part 61 [40 CFR 503.46(a)(1)]. You may report no beryllium stack gas monitoring data if you attach a document to this form detailing the approval you received from your EPA Regional Administrator to waive the monitoring of beryllium in the stack gas of your incinerator (40 CFR part 61, Subpart C). EPA will use the stack gas monitoring data below to evaluate compliance with emissions standards for beryllium (40 CFR 61.32) and mercury (40 CFR 61.52).

Pollutant	Value Qualifier	Mass of Pollutant During any 24-hour Period in the Stack Gas of this Incinerator (grams)	End Date of 24- hour Sampling Period	If No Data, Select One Of The Following
Mercury	=	0.0893	04/16/1993	
Beryllium	=	0.0763	04/16/1993	

**INSTRUCTIONS:** This incinerator must have instrumentation to continuously monitor and record carbon monoxide or total hydrocarbons concentrations in the stack exit gas from this sewage sludge incinerator. Please use the table below to report the monthly average concentration of carbon monoxide or total hydrocarbons in the stack exit gas from this sewage sludge incinerator, corrected for zero percent moisture and to seven percent oxygen. The monthly average concentration is the arithmetic mean of the hourly averages for the hours this sewage sludge incinerator operates during each month. EPA will use the stack gas monitoring data below to evaluate compliance with EPA's carbon monoxide and total hydrocarbons standards [40 CFR 503.40(c)(2) and 503.44(c)].

Incineration Process Control Parameter	Value Qualifier	Monthly Average Concentration (ppm, volumetric basis, 0% moisture and 7% oxygen basis	End Date of Sampling Period Month	If No Data, Select One Of The Following
Total Hydrocarbons	=	13.5	02/2018	
Total Hydrocarbons	=	14.1	03/2018	
Total Hydrocarbons	=	18.1	05/2018	
Total Hydrocarbons	=	17.3	06/2018	
Total Hydrocarbons	=	70.5	07/2018	
Total Hydrocarbons	=	13.3	09/2018	
Total Hydrocarbons	=	10.3	10/2018	
Total Hydrocarbons	=	27.1	11/2018	
Total Hydrocarbons	=	23.4	12/2018	

**INSTRUCTIONS:** Use the table below to report arsenic, cadmium, chromium, lead and nickel monitoring data from the sewage sludge feed to this sewage sludge incinerator. Please report the average daily concentration for each pollutant in units of milligrams per kilogram (mg/kg) of total solids, dry weight basis.

Please note that the average daily concentration is the arithmetic mean of the concentration of a pollutant in milligrams per kilogram of sewage sludge (dry weight basis) in the samples collected and analyzed in a month [40 CFR 503.41(c)]. The frequency of monitoring for these metals shall be as required in 40 CFR 503.46(a)(2). EPA will use these sewage sludge feed monitoring data and the incinerator-specific limits below to determine compliance with EPA's biosolids incineration requirements (40 CFR 503, Subpart E).

Pollutant	Value Qualifier	Average Daily Concentration in the Sewage Sludge Feed to this Incinerator (mg/kg of total solids, dry-weight basis)	Start Date of Sampling Period	End Date of Sampling Period	If No Data, Select One Of The Following
Arsenic	=	1.9	01/17/2018	11/13/2018	
Cadmium	=	1.22	01/17/2018	11/13/2018	
Chromium	=	12	01/17/2018	11/13/2018	
Lead	=	13	01/17/2018	11/13/2018	
Nickel	=	7.6	01/17/2018	11/13/2018	

**INSTRUCTIONS:** Use the table below to report the average daily concentration limits for the sewage sludge feed to this incinerator (mg/kg of total solids, dry weight basis). EPA will use these incinerator-specific limits and the sewage sludge feed monitoring data reported above to determine compliance with EPA's biosolids incineration requirements (40 CFR 503, Subpart E). Please use the procedures in EPA's regulations to calculate these incinerator-specific limits (40 CFR 503.43).

Pollutant	Average Daily Concentration Limit for the Sewage Sludge Feed to this Incinerator (mg/kg of total solids, dry-weight basis)
Arsenic	1425
Cadmium	4439
Chromium	4552
Lead	45461
Nickel	144470

Sludge Management - Other Management Practice

## Additional Information

Please enter any additional information that you would like to provide in the comment box below.

## Additional Attachments

Name	Created Date	Size
Appen 5.xls	02/04/2019 6:26 PM	423.00 KB
Appen 6 and 7.docx	02/04/2019 6:26 PM	16.45 KB
Bham 503 Summary.docx	01/25/2019 3:07 PM	26.51 KB
Table 3.xls	01/25/2019 3:08 PM	44.00 KB
Table 2.xls	01/25/2019 3:07 PM	48.00 KB
Appen 1.xlsx	01/25/2019 3:08 PM	23.00 KB
Appen 2.xls	01/25/2019 3:08 PM	41.00 KB
Appen 3.xls	01/25/2019 3:08 PM	34.50 KB
Append 4.xls	01/25/2019 3:08 PM	33.00 KB

## Certification Information

I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designed to assure that qualified personnel properly gathered and evaluated the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information submitted is, to the best of my knowledge and belief, true, accurate, and complete. I have no personal knowledge that the information submitted is other than true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations. Signing an electronic document on behalf of another person is subject to criminal, civil, administrative, or other lawful action.

**Certified By:** Karl Lowry (KARLOWRY)

**Certified On:** 02/05/2019 12:48 PM